

guaranteeing security.

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【0006】 In order to achieve the above objects of the present invention, according to a first embodiment of the present invention, an unauthorized access avoiding method in an intelligent interconnecting device having a function of repeating a packet which is transmitted/received between a plurality of computers and being structured to be controllable by an external apparatus based on a TCP/IP protocol is provided, the unauthorized access avoiding method in an intelligent interconnecting device comprising the following steps:

• when an access from an external apparatus is authenticated through execution of the TCP/IP protocol, extracting and storing a source IP address included in a packet which is transmitted from the external apparatus;

• when an access from an external apparatus occurs thereafter, judging whether or not a source IP address of the external apparatus giving the access is identical with the stored source IP address; and

• only when the source IP address of the external apparatus is judged to be identical with the stored source IP address, permitting communication

thereafter between the external apparatus having the source IP address identical with the stored source IP address and the intelligent interconnecting device.

5    **【0007】** In this method, after the source IP address of the external apparatus is once authenticated through the execution of the TCP/IP protocol, the source IP address included in the packet which is transmitted from the external  
10 apparatus at the time of executing the protocol is extracted and stored so that, when some access occurs from an external apparatus thereafter whose source IP address is judged to be nonidentical with the stored source IP address, the external  
15 apparatus is determined as an apparatus not to be responded to. Therefore, a conventional disadvantage that an access is permitted even with a nonidentical source IP address as long as a user identifier and a password thereof are identical  
20 with a predetermined identifier and a predetermined password is surely eliminated. Consequently, security is further improved with a simple structure compared with a conventional method.

25    **【0008】** According to a second embodiment of the

present invention, an unauthorized access avoiding  
program which is executed in an intelligent  
interconnecting device having a function of  
repeating a packet which is transmitted/received  
5 between a plurality of computers and being  
structured to be controllable by an external  
apparatus based on a TCP/IP protocol is provided,  
the unauthorized access avoiding program for an  
intelligent interconnecting device comprising the  
10 following steps:

- a first step of causing the intelligent  
interconnecting device to judge whether or not a  
first access to the intelligent interconnecting  
device from outside has occurred;
- 15 • a second step of causing the intelligent  
interconnecting device to carry out authentication  
processing by using a user identifier and a  
password based on the TCP/IP protocol when it is  
judged in the first step that the first access from  
20 outside has occurred;
- a third step of causing the intelligent  
interconnecting device to judge after the  
authentication processing in the second step  
whether or not authentication is given;
- 25 • a fourth step of determining an authenticated